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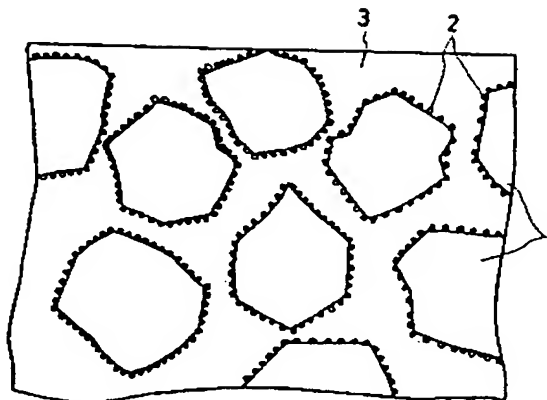
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TITLE : MAGNETIC POWDER FOR PLASTIC
MAGNET OR RUBBER MAGNET AND
MANUFACTURE THEREOF



ABSTRACT : PURPOSE: To obtain a plastic magnet having a high maximum energy product by a method wherein, after powder of a rare-earth cobalt alloy including a carbon- containing organic binder and/or carbon powder is compressed and molded in a magnetic field, the molded material is heat-treated in an inert gas atmosphere and is then pulverized.

CONSTITUTION: After a 30 % solution of polyvinyl alcohol as an organic binder containing carbon atoms has been added to an alloy powder composed of samarium and cobalt, these substances are mixed and are granulated. The obtained particles are compressed and molded in a magnetic field of 20 kOe. Then, if the compressed and molded material is heat-treated in an inert gas atmosphere at 1050~1200 °C, carbon remains on the surface of the magnetic powder (crystalline particles) 1 in a strongly combined state. then, the heat-treated and molded material is pulverized in a ball mill. The powder mixed with nylon 3 and the mixture is injection-molded in a magnetic field so that a plastic magnet can be obtained in such a way that the space between magnetic powder 1 coated with a carbon film 2 is combined by the nylon 3. Through this constitution, the rate of the content of the magnetic powders 1 can be increased and the maximum energy product can be increased.

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